



COMPONENTS NEWS

HELIODISPLAY PROJECTS INTO THIN AIR

The future for PC displays took a sci-fi twist with the unveiling of a high-tech projector that can project computer desktop screens into the air. Users can manipulate the floating image from the projector to adjust, for example, the position of a mouse cursor with a finger.

Developed by San Francisco-based firm IO2 Technology, the Heliodisplay can display video and PC data in high resolution without the need for a supporting screen. Users can walk right through the image, something IO2 said has never before been possible. The firm added that the PC cursor could be controlled by hand, without the need for special gloves.

Chad Dwyer, CEO of IO2, said: "Based on the initial reaction and feedback we've received, the consumer and commercial applications for Heliodisplay are endless." The Heliodisplays, which took over a year to develop, are available with diagonal projecting image sizes of between 22" and 42".

FIREFOX STALLS AS INTERNET EXPLORER PULLS AHEAD

Microsoft's Internet Explorer is fighting back in the wake of recent market share gains made by the popular Firefox browser, and is clawing back users from its open-source rival.

According to web-monitoring firm NetApplications, IE accounted for 87.2 per cent of browsers in July, a jump from 86.56 per cent in June. By contrast Firefox, rated as the second most popular browser, saw its share drop from 8.71 per cent in June to 8.07 per cent in July.

NetApplications noted that the decision by Mozilla to create a for-profit division coincided with the browser dropping 0.7 per cent of its market share in 30 days.

IE and Firefox, NetApplications estimates, account for over 95 per cent of installed browsers being used to access the web. The monitoring firm's research shows that Apple's Safari came a distant third with just 2.1 per cent of the market.

ESYS AND ASDA JOIN FORCES

ESys has signed a deal with Asda to have its PCs distributed through the supermarket's chain of stores. The first PC to be sold will cost just £280. The specification is minimal, with 256MB of memory, a 2.4GHz processor and a 40GB hard disk, but it should still cope with standard Windows applications. We will review one in next month's issue.



REVIEW MEDIA CENTER PC

AJP GE1 Digital Home Solution

RATING ★★★★★

PRICE £663 inc VAT

SUPPLIER AJP 020 8208 9744

DETAILS www.ajp.co.uk



AJP's GE1 is a Windows-centric competitor to Apple's Mac Mini that puts miniaturisation ahead of raw performance. The burgundy metallic plastic box is a little smaller than the Mac Mini, but feels considerably less solid; a little pressure on the top lip forces the slot-loading DVD writer closed. Notebook components are used throughout, so it's much quieter than a desktop computer, but it requires an external power supply. The power button is placed at the back of the system and is awkward to get at if you tuck the system away.

Although tiny, the GE1 isn't underpowered. It uses an Intel Mobile Pentium M processor running at 1.7GHz with a 533MHz frontside bus and 512MB of memory. This setup lets you undertake processor-heavy computing tasks such as photo and video editing without the system grinding to a halt. Graphics processing is left to Intel's 915GM, which is fine with general Windows applications but struggles to run 3D games. The GE1 is Centrino-compliant and has a wireless network adaptor, so you can connect to any network within range.

Windows Media Center Edition is installed to provide a clean interface for watching DVDs, browsing a photo collection or listening to music.

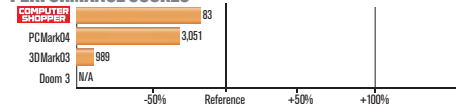
The IR remote control receiver uses one of the two USB ports, with the other occupied by a receiver for Microsoft's wireless mouse and keyboard. There are no free USB ports for additional external devices such as a printer or scanner, but you can download photos from your digital camera using the front-mounted 4-in-1 memory card reader. One option would have been to use the integrated Bluetooth module with a Bluetooth keyboard and mouse at the expense of Media Center Edition, freeing up the USB slots and reducing the overall price by £30.

The GE1 comes without a screen, so you can use it with your existing TV. You should budget at least £150 for an LCD, as standard TVs struggle to resolve enough detail to display text and intricate graphics accurately. This pushes the price from a reasonable £663 to around £800. For this you could buy any of the PCs in our PC Labs test on page 162, all of which offer more computing power.

If you want a Windows-based computer without the bulk of a standard desktop or a media centre-styled system, this is an interesting option, but we'd happily sacrifice some of its processing power for better build quality and presentation.

David McKinnon

PERFORMANCE SCORES



✓ Tiny Windows-based computer

✗ Expensive yet feels a bit cheap

SPECIFICATIONS Intel Mobile Pentium M 740 1.7GHz processor, 512MB memory, 80GB hard disk, 128MB Intel 915GM graphics, DVD+/-RW +DL, DVD-RAM

HOTLIST DESKTOP PC

MESH Matrix Eclipse Blast

RATING ★★★★★

PRICE £650 inc VAT

SUPPLIER Mesh Computers 08700 464747

DETAILS www.meshcomputers.com

This system is built from quality components, with features and performance well in excess of its price. The solid chassis contains an Asus motherboard with every port you'll need. There is also a terrific ViewSonic monitor with a speedy 8ms response time.

It isn't the fastest budget PC we've seen, but it will still speed through day-to-day tasks. It produced an overall score of 92 in our *Shopper* benchmarks. It is an excellent choice for gamers on a budget, and the X700Pro graphics card managed just under 30fps in our demanding Doom 3 test.



This great package is rounded off with a fantastic three-year warranty, including one year's onsite service. This system is ideal for those on a budget, and should last for years to come.

SPECIFICATIONS AMD Athlon 64 3000+, 512MB RAM, 200GB hard disk, 128MB ATI X700Pro, DVD+/-RW +/-DL and DVD-ROM, 17" LCD

REVIEW **DESKTOP PC****DELL**
Dimension 9100

RATING ★★★★★

PRICE £1,349 inc VAT

SUPPLIER Dell 08709 075818

DETAILS www.dell.co.uk

Dell's Dimension 9100 is housed in a smart and well-engineered BTX case. Only the grey drive bay surround spoils an otherwise attractive three-tone colour scheme.

BTX is a new design for motherboards and cases that streamlines airflow through a computer. Air is sucked through the front grille and passes through the processor heat sink, over the graphics card and out at the back. Consequently, the Dimension 9100 sounds quieter than most PCs. Dell has ditched all legacy ports on the 9100, so there are no PS/2, serial or parallel ports, leaving four USB2 ports at the rear for all your peripherals.

Internally the Dimension 9100 looks crowded. The dual-core Pentium D 840 processor is hidden beneath a plastic air guide and large heat sink, and the two sticks of 512MB DDR2 PC3200 memory are submerged in a tangle of wires. Two 160GB drives are fastened to the bottom of the case and connected in a RAID 1 configuration, giving 290GB (formatted) fast access. This aids performance, but if either drive fails you'll lose all your data.

Our benchmarks only hint at the potential of the dual-core processor, but they show that you can happily run two tasks together, such as



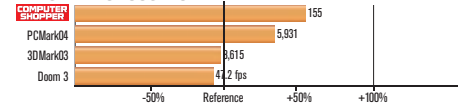
encoding a video and playing a game with no noticeable slowdown.

Only the 256MB nVidia GeForce 6800 graphics card has free space around it, which is all the better for cooling. It's fine for the latest games, but it seems underpowered given the rest of the setup. Upgrading is also limited; the BTX motherboard has only one PCI Express x16 slot, so you'll have to replace the card rather than supplement it with a second 6800 in SLI configuration.

The DVI-fed 19" LCD panel supplied is superb. A flawless greyscale is complemented by lively colours with near-perfect definition through all tones. Keyboard and mouse are wired, though the mouse uses a ball rather than the more responsive optical sensor we're used to. The Dell-branded 2.1 speaker system is fine for music, games and movies, as long as you don't want surround sound. A double-layer DVD writer and DVD-ROM are fitted.

Dell's Dimension 9100 is an excellent PC. It's fast enough to cope with tomorrow's applications without sounding like a vacuum cleaner, has plenty of storage and a superb 19" monitor. All it lacks is a faster graphics card to fully justify its £1,349 price.

David McKinnon

PERFORMANCE SCORES

Quiet and fast; excellent monitor



No legacy ports; quite expensive

SPECIFICATIONS Intel Pentium D 840 processor, 1GB RAM, 2x 160GB hard disks, 256MB nVidia GeForce 6800 graphics, DVD+/-RW +DL, DVD-ROM. Part code PPUK5-D09917r

HOTLIST **DESKTOP PC****PC NEXTDAY**
Zoostorm 6607

RATING ★★★★★

PRICE £900 inc VAT

SUPPLIER sales@pcnextday.co.ukDETAILS www.pcnextday.co.uk

This PC is an all-round entertainer with something for everyone. The 6600GT graphics card is capable of playing all the latest games with smooth frame rates, while the hybrid TV card can receive, record and pause live analogue or digital TV. A large 250GB hard disk and DVD writer are included for archiving favourite shows, and DVD software is provided for watching movies. All this media comes to life with the large 19" LCD monitor and stereo speakers provided.

The Zoostorm is no slouch in the power stakes, either. Its AMD Athlon 3500+ processor is paired with a generous 1GB of RAM. This made short work of our Shopper benchmarks with an



overall score of 106. For entertainment or work the Zoostorm is a great system for the money. Our only reservation is the limited one-year return-to-base warranty; an onsite warranty is preferable for most users.

SPECIFICATIONS AMD Athlon 64 3500+, 1GB RAM, 250GB hard disk, 128MB nVidia GeForce 6600GT graphics, DVD+/-RW +DL and DVD-ROM, 19" LCD

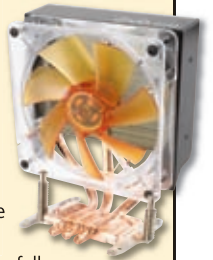
BYTE SIZE!

Our round-up of the best new gadgets and software

AKASA
Evo 120

RATING ★★★★★

PRICE £34 inc VAT

SUPPLIER www.eclipsecomputers.comDETAILS www.akasa.com

Akasa's Evo 120 is one of the largest heat sink and fan combinations we've seen. The copper heat pipes screw to the motherboard (it supports AMD and Intel processors) and run up to the large 120mm fan, which draws heat away. You'll need a full-sized desktop case to use it, though, as it's too bulky to fit in anything smaller.

Akasa claims that the Evo is quiet, but its default fan speed is no better than the reference AMD or Intel fans. However, it comes with a speed control dial so you can turn it down.

We tested the Evo on an Athlon 64 3500+ PC, and it stopped it from crashing regularly. However, it's not suitable for a lot of PCs.

David Ludlow

BETTER ENERGY SYSTEMS
Solio

RATING ★★★★★

PRICE £47 inc VAT

SUPPLIER

www.savastore.comDETAILS www.solio.com

The music tends to be over when your iPod's battery dies far from a suitable power source, but this portable solar charger might save the day. There are two versions: one has a selection of mobile phone plugs, but the iPod model reviewed here connects to an iPod mini or third-generation iPods onwards. Connector packs are available to support more devices, but cost around £13.

Britain's meagre sunshine would make charging tedious, if not for the Solio's built-in lithium-ion battery. Leaving the three solar panels unfurled allows it to store power. When full, it charges a connected device at the normal rate. The Solio works well, looks smart and helps save electricity, but it isn't cheap.

Simon Handby



BYTE SIZE!



Our round-up of the best new gadgets and software

PODGEAR PocketParty Shuffle

RATING ★

PRICE £22 inc VAT

SUPPLIER www.savastore.com

DETAILS www.podgear.net

This tiny pair of powered speakers is designed for use with the iPod Shuffle. Power

comes from a single AA battery, but the sliding plastic that covers it seems very thin. The MP3 player slides on to a fixed mini jack connector and clips safely in place, integrating nicely into a setup that looks like a miniature boom box.

Unfortunately, boom is far down the list of suitable adjectives for the PocketParty's sound. Distortion sets in before the Shuffle reaches full volume, and the speakers' output has little bass or treble. Though it looks cool, a splitter cable with another pair of quality earphones would cost less and be a better way to share music.

Simon Handby



PENTAX PocketJet 3 Plus

RATING ★★

PRICE £310 inc VAT

SUPPLIER www.expansys.com

DETAILS www.pentaxtech.com

This thermal printer is designed for mobile use. It comes with a NiMH battery that should print 100 sheets when full and automatically charges when connected to the mains. Data can be sent to print via a USB or infrared connection.

The PocketJet took 29 seconds to print a single-page letter. Text quality was acceptable, but at only 300dpi outlines were a bit jagged. There are no ink costs, but Pentax's single-sided thermal paper costs about nine pence per sheet. Unless you need the smallest possible printer, we would recommend Canon's PIXMA iP90 (reviewed in *What's New, Shopper* June 2005). The PIXMA is more expensive to run, but it's faster, costs less for the initial purchase and prints in colour.

Simon Handby



REVIEW BASE UNIT

NETHIGHSTREET CS 500 BASE

RATING ★★★★★

PRICE £500 inc VAT

SUPPLIER NetHighStreet 08700 271339

DETAILS www.nethighstreet.com

Upgrading your PC regularly is a great way to keep up with current technologies without spending a fortune. Unfortunately, bringing an old, outdated system up to scratch by making lots of changes is often prohibitively expensive, difficult or even impossible, as compatible components that boost performance can be hard to find.

The alternative to incremental upgrades is to replace the computer. You'll already have a monitor, mouse and keyboard and maybe a printer from the old system. If you are happy with these, it's a waste of money to buy a new computer when you need only a base unit. NetHighStreet's CS 500 BASE has no screen, keyboard or mouse. It uses an AMD Athlon 64 3500+ processor with 512MB of RAM. This is the minimum we'd recommend for an upgrade system; any less, and you'll soon have to open your wallet again.

Like most new computers, it breezes through office tasks and has enough kick to let you get creative with photos and video, although an extra 512MB of RAM would enhance video encoding.

An Asus ATI Radeon X700 graphics card with 256MB of memory takes care of 3D graphics. It's fast enough for casual gamers as it runs current



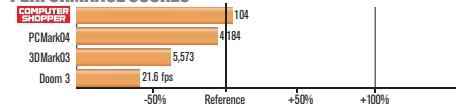
games at a fair lick, but if you eagerly await the latest titles, it won't be long before an upgrade is on your mind again. Current games run fine, though frame rates will suffer if you increase the detail level. It has DVI and D-sub outputs, so it will work with an existing CRT or LCD monitor, and S-video and composite video out mean you can connect to a TV.

The 200GB Maxtor hard disk has plenty of space for all your applications as well as music and photo collections. The DVD drive can write to two-layered discs. There are no speakers supplied, but there is a range of audio outputs including optical and coaxial S/PDIF and 7.1 surround-sound line-out. A limited software bundle includes Norton Internet Security and OpenOffice.org, but it's assumed you own your preferred applications.

Building the system costs £550 for parts and, if you're not versed in the technicalities of computing, some time and frustration. NetHighStreet charges only £500 and throws in the software and peace of mind afforded by a one-year RTB warranty on parts and three years' cover on labour. If the specification fits the bill and you have peripherals, it's great value.

David McKinnon

PERFORMANCE SCORES



✓ Great value

✗ The bare minimum specification we'd recommend for a new computer system

SPECIFICATIONS AMD Athlon 64 3500+ processor, 512MB RAM, 200GB hard disk, 256MB ATI Radeon X700 graphics, DVD+/-RW +/-DL

HOTLIST DESKTOP PC

MESH Matrix Titan DVX

RATING ★★★★★

PRICE £1,200 inc VAT

SUPPLIER Mesh Computers 08700 464747

DETAILS www.meshcomputers.com

If you can stretch to spending £1,200 on a PC, this is a fantastic choice. At its heart is AMD's latest dual-core technology; two processor cores on one chip allow for true multi-processing at amazing speeds. This propelled the Titan to an incredible score of 156 in our *Shopper* benchmarks, and it will only improve as more multithreaded applications become available.

No short cuts have been made in other areas. The component quality is high throughout, with an Asus motherboard, ViewSonic 19" monitor, creative speakers and a digital TV card. The speedy X800XL graphics card produced a silky smooth 63.8fps in our Doom 3



test, and should keep you gaming for some time to come. Finally, Mesh has included a three-year onsite warranty for your peace of mind.

Mesh has achieved a rare feat here, managing to include the technology of the future at today's prices, and without any sacrifices.

SPECIFICATIONS AMD Athlon 64 X2 4400+ processor, 1GB RAM, 250GB hard disk, 256MB ATI Radeon X800XL graphics, DVD+/-RW +/-DL, DVD-ROM, 19" LCD



CHOOSING A...

PC
SYSTEM

Follow our simple step-by-step guide to buying a PC and get the perfect system for your needs

1 The minimum specification of PC we recommend, shown in grey opposite, is a good starting point when working out your ideal system. This PC would cost around £500 and is perfectly capable of running everyday office, multimedia or education software, as well as doing anything on the internet. But it's an unexciting PC. It will be able to play DVD movies, but they won't sound too impressive and games are a total no-no.

2 If you're interested in editing your own movies, you'll need a DVD rewriter. Make sure that you get one that supports both +R and -R formats. It's also worth getting one that will write double-layer discs, as this lets you squeeze twice as much information on a DVD.

There's not much difference in price between the different drive speeds, so we recommend getting one that can write DVD+R and DVD-R at 16X, and DVD+R DL at 4X. If you'll be doing a lot of video projects and disc writing, upgrade to a 200GB hard disk as a minimum.

3 Interested in games? Then upgrade to 512MB or 1GB of memory and a 200GB disk and get a graphics card. Budget cards based on the GeForce FX 5200 graphics processor or Radeon 9800 will cope with this year's games, but to play next year's just as smoothly (and enjoy gorgeous graphics today) you'll want anything up to a GeForce FX 7800GTX or Radeon X850XT. You'll also need a faster processor.

4 Which faster processor? Well, faster AMD processors such as the Athlon 64 3400+ are good value. An Athlon FX-based system will cost £300 more but offers much better performance. The alternative is a PC based on Intel's Pentium 4 processor. These are also pricier, but many people feel reassured by the Intel brand, and the fastest P4s always do well in our performance tests.

5 If you're really not interested in games you can definitely live with integrated or cheap graphics, but there are plenty more reasons to upgrade the memory, hard disk or processor.

If you'll use your PC for serious DTP, music or photo editing you need the same kind of processor, memory and disk as for games. For video editing, consider getting two hard disks, perhaps in a RAID array.

6 A quality sound system will enhance all manner of PC activities. To hear the surround soundtrack of a DVD at its best, you'll need a quality 5.1 speaker system. Games can also use such a system to throw sound effects around you. If you're interested in neither games nor DVDs (or don't want to trail wires all around the room), go for a quality stereo pair with a subwoofer to boost the bass instead.

If you're interested in music or want better-quality sound, you'll need to invest in a dedicated sound card. As well as providing enhanced sound, such as Environmental Audio eXtension (EAX), which tweaks the acoustics to make sound appear to be playing in different environments, you'll get higher-quality outputs and more inputs.

7 Although 17" LCD screens save on desk space and look stylish, the limited display size means some may find onscreen text hard to read. A 19" LCD will cost around £50 more, has the same resolution (1,280x1,024) and is easier on the eye. It's better for those who want to edit large photos, documents or spreadsheets, run two applications side by side, or just look important. Twenty-inch LCDs are available from £400 and have a higher resolution (1,600x1,200).

FILL IN YOUR SPECS HERE

(Recommended minimum in grey)

PROCESSOR: Athlon 64 3000+
MEMORY: 256MB DDR
HARD DISK: 120GB
STORAGE: 52X CD-RW/16X DVD combo drive
SOUND: Integrated
SPEAKERS: Stereo
GRAPHICS: Integrated
MONITOR: 17" LCD
EXTRAS: 56K modem
CONNECTORS: 4x USB2.0, network
SOFTWARE: Windows XP Home Edition
BASICS: Keyboard, mouse

8 The standard set of connectors can be usefully improved with extra USB2 ports, to which most run-of-the-mill PC gadgets attach, and a FireWire port, for fancy gadgets including digital video (DV) cameras.

9 Windows XP Home Edition is preinstalled on most new PCs. Any extra software bundled should be assessed critically. It may be that you'll never actually use it. But equally, you may happen across a PC that includes software you'd otherwise have paid for, in which case you'll almost certainly save lots of money by having it preloaded, although you won't get technical support included.

10 Money left over? A TV card will let you watch television on your PC screen plus record programmes to your hard disk, or capture analogue video from a camcorder. Rather than splashing out on an extended warranty, pay extra to get the make of PC your friends or colleagues swear by.

